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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,434	02/03/2005	Jan Birnstock	5367-104PUS	9330
27799	7590	02/28/2006	EXAMINER	
COHEN, PONTANI, LIEBERMAN & PAVANE 551 FIFTH AVENUE SUITE 1210 NEW YORK, NY 10176			RIELLEY, ELIZABETH A	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/500,434

Applicant(s)

BIRNSTOCK ET AL.

Examiner

Elizabeth A. Rielley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendment filed 12/5/05 has been entered and considered by the Examiner. Claims 17-24 have been added. Currently, claims 1-24 are pending in the instant application.

Claim Objections

Claim 17 objected to because of the following informalities: there is a typo where OLFD should read OLED. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 6, 8, 9, 11, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakayama et al (US 6133691).

In regard to claim 1, Nakayama et al ('691) teach an organic light emitting diode (OLED) with at least one active, light emitting organic layer (403a, 403b; figure 18a; column 6 line 22-41) which has refractive index inhomogeneities (column 7 line 17 to column 8 line 14; column 8 line 54 to column 10

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line 3), wherein the organic layer has at least one first partial region and at least one second partial region which comprise organic material and have different refractive indices, and the partial regions form a layer with a composite-like structure (see figure 18).

In regard to claim 2, the Examiner notes that the Applicant's recitation of different partial regions formed by separation of the applied layer material is considered a product by process limitation. The patentability of the claim resides on the final product and not the process by which is manufactured. Accordingly, Nakayama et al ('691) teachings of partial regions in the OLED light emitting layer is considered to meet the claimed recitation.

In regard to claims 3 and 11, Nakayama et al ('691) teach the organic layer has charge carrier transport material and/or emitter material (column 6 lines 22-41).

In regard to claim 5, Nakayama et al ('691) teach the organic layer has at least two polymers with different refractive indices (column 8 line 54 to column 10 line 36).

In regard to claim 6, Nakayama et al ('691) teach the first and second partial regions are produced in a layer made from a single type of a plastics material by means of local variation of a chemical and/or physical property (column 8 line 54 to column 10 line 36). The Examiner notes that the Applicant's recitation of a plastic material made of local variation of a chemical and/or physical property is considered a product by process limitation. The patentability of the claim resides on the final product and not the process by which is manufactured. Accordingly, Nakayama et al ('691) teaching of a first and second partial region made in a single layer of plastic material is considered to meet the claimed recitation.

In regard to claim 8, the Examiner notes that Applicant's recitation of the locally varying property is at least one of the properties degree of crosslinking, degree of branching density and copolymerization, is considered a product by process limitation. The patentability of the claim resides on the final product and not the process by which is manufactured. Accordingly, Nakayama et al's ('691) teaching of a first and second partial region made in a single layer of plastic material is considered to meet the claimed recitation.

In regard to claim 9, Nakayama et al ('691) teach a method for producing an organic light emitting diode (OLED) with at least one active, light emitting organic layer which has refractive index inhomogeneities (403a, 403b; figure 18a; column 6 line 22-41) characterized in that wherein the material of the organic layer is applied to a carrier in such a way that, during or after a coating step (column 4 lines 13-29), at least one first partial region and at least one second partial region form in the layer, said partial regions having different refractive indices (column 7 line 17 to column 8 line 14; column 8 line 54 to column 10 line 3), and the partial regions form a layer with a composite-like structure (see figure 18a).

In regard to claim 17, Nakayama et al ('691) teach an organic light-emitting diode (OLED) with at least one active, light emitting layer (403a, 403b; figure 18a; column 6 line 22-41), the light emitting layer comprising a first matrix material and at least two partial regions of a second material which are embedded in the matrix material (see figure 16); wherein the second material has a refractive index different from the matrix material (column 7 line 17 to column 8 line 14; column 8 line 54 to column 10 line 3).

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In regard to claim 18, Nakayama et al ('691) teach the matrix material is an active, light-emitting material and the regions of the second material form scattering centers in the matrix material (column 7 line 17 to column 8 line 14; column 8 line 54 to column 10 line 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama et al (US 6133691) in view of Von Hoene et al (US 4123269).

In regard to claims 4 and 12, Nakayama et al teach all the limitations set forth, as described above, except the organic layer has electrically inactive material. Van Hoene et al ('269) teach an organic layer has electrically inactive material (column 3 line 1-62) in order to protect the electrically active parts of the EL layer (column 2 lines 12-14). Hence, it would have been obvious at the time of the invention to one of ordinary skill in the art to combine the OLED of Imanishi with the inactive material of Von Hoene. Motivation to combine would be to protect the electrically active parts of the EL layer.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama et al (US 6133691) in view of Imanishi (US 6828042).

Nakayama et al teach all the limitations set forth, as described above, except crystalline regions within an amorphous layer matrix material. Imanishi et al ('042) teach crystalline regions within an amorphous layer matrix material (column 10 lines 47 – 52) in order to improve light discharge efficiency (abstract). Hence, it would have been obvious at the time of the invention to one of ordinary skill in the art to combine the OLED of Nakayama with the crystalline regions of Imanishi. Motivation to combine would be to improve light discharge efficiency.

Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama et al (US 6133691) in view of Okada et al (US 20020064683).

Nakayama et al ('691) teach all the limitations set forth, as described above, except the matrix material is made from PPV and PVK. Okada et al ('683) teach the matrix material is made from PPV and PVK (paragraph 74) in order to increase the conductivity of the device (paragraph 74). In regard to Applicant's limitation that light emitting layer comprises one-third PPV and two-thirds PVK as well as half PPV and half PVK, it would have been obvious at the time of the invention to one of ordinary skill in the art to make the light emitting layer in the above fractions, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama et al (US 6133691) in view of Tessler et al (WO 00/04593).

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Response to Arguments

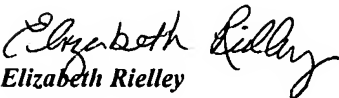
Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Rielley whose telephone number is 571-272-2117. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Elizabeth Rielley

Examiner
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